United States Department of Agriculture | Forest Service | R3 Regional Office | 333 Broadway SE
Albuquerque, NM 87102
FAX (505) 842-3800
V/TTY (505) 842-3292

File Code: 3420 **Date:** October 25, 2004
Route To:

Subject: Proposed FY 2005 American Springs Forest Health Project, Espanola Ranger District (espanolard)

To: Forest Supervisor, Santa Fe National Forest

The FY 2005 American Springs forest health project would thin a 170 acre ponderosa pine stand on the Espanola Ranger District near Los Alamos. Dave Conklin of our staff and Bill Armstrong (Santa Fe NF) had examined portions of this stand in May. Armstrong and Dave Isackson (Espanola RD) subsequently developed a proposal for treatment of this area under our insect and disease prevention/suppression program. Conklin conducted an additional walkthrough examination of the stand on October 21.

The proposed treatment area is located west of Highway 501, near Los Alamos National Laboratory (LANL) facilities and about four miles southwest of Los Alamos. It forms a gently sloping bench above Cañon de Valle and Water Canyon, ascending toward the higher terrain to the northwest. Virtually the entire stand (which is located directly between Bandelier National Monument and Los Alamos) burned at relatively low intensity in the 2000 Cerro Grande wildfire. Much of the forest adjacent to the unit was completely consumed by Cerro Grande. This area receives considerable recreational use by LANL employees and other Los Alamos residents and visitors; its value for recreation-- as well as for wildlife--has increased since Cerro Grande.

Stand Conditions. Most of this stand is mature ponderosa pine forest, with at least two or three younger cohorts contributing toward an uneven-aged structure. Basal areas typically range from 80 to 140 ft^2/acre. Most of the upper (northern) one-third of the stand is a younger, more open pine forest, with some sizable aspen clones. Minor amounts of Douglas-fir, white fir, and southwestern white pine occur in a few areas. Site quality is moderate, with estimated site indexes of 65 to 75 throughout. Most of the stand was selectively harvested around 20 to 25 years ago, and some vigas and/or small sawtimber were removed from the southwest portion 8 to 10 years ago.

Small aspen clones are scattered throughout much the area, with the largest in the upper portion of the unit. These clones consist of relatively short, small diameter trees, probably a result of the elevation and the relatively low site productivity. Signs of elk damage (rubbing) on the trunks are common, as are canker diseases. Many of these clones sustained significant fire damage. Re-sprouting was common around and within several of these clones; relatively little browsing damage was observed.

The entire stand tends to be “park-like” due to a lush understory of grasses. Gambel oak is common, but usually confined to small clumps. Fire history and low grazing pressure have likely contributed to this condition. The Cerro Grande fire killed a large proportion of the

existing conifer seedlings and saplings, as well as scattered pole and sawtimber size trees. Nearly all the larger surviving pines have significant bole char, and their "raised" crowns indicate that high levels of crown scorch occurred throughout most of this stand. Many trees have survived for 4+ years with very heavy bole char. Bark beetles have killed significant numbers of fire-damaged and drought-stressed trees since 2000.

Pine dwarf mistletoe occurs in very limited portions of this stand (it is most common along the edges of the unit, near the steep canyon slopes). Crown scorch from the Cerro Grande fire (as well as from the 1954 Water Canyon fire, which also burned this area) probably had a very significant reducing effect on the dwarf mistletoe in this stand.

Proposed treatment. Thinning would be done in all size classes, but would focus primarily on overstocked pole-size groups. These groups, which occur frequently throughout the 170 acre area, would be thinned to 40 to 60 ft^2, retaining the better dominant and codominant trees, regardless of spacing. A light "stand improvement" cut would remove low-vigor, suppressed, and deformed older trees. These thinnings would improve the growth and vigor of the remaining stand, reducing bark beetle susceptibility.

The proposal calls for thinning saplings to 20 X 20 foot spacing. We think this spacing is wider than necessary for these young trees, and that it would be preferable to retain more them. Closer spacing should result in better form as these young trees grow; in additional, retaining more of them will help offset future mortality. Sapling groups make up a very small proportion of the 170 acre area, and most of the existing groups are quite small. Probably more than 80 percent of the young regeneration in this stand was killed in the Cerro Grande fire. We think that an eight to 10 foot average spacing for saplings would be more appropriate for this stand.

This treatment would be conducted between mid-July and mid-December to minimize the potential for an outbreak of engraver beetles. Since the area has good road access and gentle terrain, it is expected that much of the larger cut material would be removed for firewood by the public.

Please contact us is you have questions about this evaluation or would like additional assistance with this project.

/s/ Debra Allen-Reid
DEBRA ALLEN-REID
New Mexico Zone Leader,
Forest Health

cc: William Armstrong, Leonard Lucero, David W Isackson, John Anhold, John Miera